

CLAIMS

What is claimed is:

1. A cooking apparatus, comprising:
 - a casing forming an enclosure of the cooking apparatus; and
 - a temperature adjusting unit mounted on the casing, with an upper portion thereof protruding from an upper surface of the casing on which food is placed, wherein the temperature adjusting unit exchanging heat with the food to heat or cool the food.
2. The cooking apparatus according to claim 1, wherein the temperature adjusting unit comprises a peltier element to draw heat at a first end thereof and emit the heat at a second end thereof.
3. The cooking apparatus according to claim 2, wherein the temperature adjusting unit further comprises a heat transferring member protruding from the upper surface of the casing on which food is placed, the heat transferring member drawing or emitting the heat according to an operation of the peltier element.
4. The cooking apparatus according to claim 2, wherein the temperature adjusting unit further comprises:
 - a heat emitting member mounted below the peltier element to allow the heat to be exchanged between the peltier element and air; and
 - a ventilation fan mounted below the heat emitting member to draw external air into the casing by generating a ventilation force that exchanges the heat with the heat emitting member.
5. The cooking apparatus according to claim 2, wherein the temperature adjusting unit further comprises:
 - a temperature adjusting switch to set a temperature of the food; and
 - a temperature sensor to detect the temperature of the food.
6. The cooking apparatus according to claim 1, further comprising a heat generating unit to cook the food by generating heat.

7. The cooking apparatus according to claim 6, wherein the heat generating unit comprises a coil that is supplied with alternating current power and generates a magnetic field to heat the food by induction heating.
8. The cooking apparatus according to claim 6, wherein the heat generating unit comprises an electrical heating wire to heat the food by electric resistance.
9. The cooking apparatus according to claim 6, wherein the heat generating unit is a gas combustion heat generating unit that generates the heat by burning gas.
10. The cooking apparatus according to claim 6, wherein the heat generating unit heats the food by induction heating.
11. The cooking apparatus according to claim 3, wherein the heat transferring member transfers the heat of the food to the peltier element or transfers the heat of the peltier element to the food.
12. The cooking apparatus according to claim 2, wherein when DC power is applied to the peltier element, positions at which the heat is drawn to, or emitted from, the peltier element are reversed when a current direction of the DC power is changed.
13. The cooking apparatus according to claim 4, wherein the heat emitting member comprises a plurality of heat emitting pins to increase a contact area with the air.
14. The cooking apparatus according to claim 4, further comprising an air inlet in a side of the casing that draws in external air, and an air outlet in a bottom of the casing that discharges air that has exchanged heat with the heat emitting member.
15. The cooking apparatus according to claim 5, wherein the temperature detected by the temperature sensor is compared with the temperature set by the user using the temperature adjusting switch to determine whether to supply DC power to the peltier element and to determine a current direction of the DC power to maintain the temperature set by the user.

16. A temperature adjusting unit for a cooking apparatus, comprising:
a peltier element drawing heat at a first end thereof and emitting the heat at a second end thereof;

a heat transferring member protruding from an upper surface of the cooking apparatus on which food is placed, and drawing or emitting the heat according to operation of the peltier element; and

a heat emitting member mounted below the peltier element to enable the heat to be exchanged between the peltier element and air.

17. The temperature adjusting unit according to claim 16, further comprising:
a ventilation fan mounted below the heat emitting member to draw external air into the cooking apparatus;

a temperature adjusting switch to set a temperature of the food; and

a temperature sensor to detect the temperature of the food.

18. The cooking apparatus according to claim 17, wherein the temperature detected by the temperature sensor is compared with the temperature set by a user using the temperature adjusting switch to determine whether to supply DC power to the peltier element and to determine a current direction of the DC power to maintain the temperature set by the user.

19. The temperature adjusting unit according to claim 16, wherein the heat transferring member transfers the heat of the food to the peltier element or transfers the heat of the peltier element to the food.

20. The temperature adjusting unit according to claim 16, wherein when DC power is applied to the peltier element, positions at which the heat is drawn to, or emitted from, the peltier element are reversed when a current direction of the DC power is changed.

21. The temperature adjusting unit according to claim 16, wherein the heat emitting member comprises a plurality of heat emitting pins to increase a contact area with the air.

22. A method of heating and cooling food in a container using a cooking apparatus having a heat generating unit and a temperature adjusting unit with a peltier element, the method comprising:

placing the container on the heat generating unit and applying alternating current power to the heat generating unit to heat the food in the container;

transferring the container from the heat generating unit to the temperature adjusting unit and setting a desired temperature of the food;

applying direct current (DC) power to the peltier element when a temperature of the container becomes greater than the desired temperature to draw the heat of the food to the peltier element to cool the food;

stopping the supply of DC power to the peltier element when the temperature of the container reaches the desired temperature; and

applying the DC power to the peltier element when the temperature of the container becomes less than the desired temperature, a current direction of the DC power reversing to transfer the heat of the peltier element to the food to heat the food.